## REMARKS

Claims 38, 39, 41, 43, 44, 47, 48, 52, 54, 57, and 60-68 are currently pending. Claims 42, 45, 46, 49-51, 53, 56, 58, and 59 have been canceled and claims 38, 43, 44, 47, 48, 54, 57, 60, and 61 have been amended.

The Examiner rejected claims 38, 39, 41-54, and 56-68 under 35 U.S.C. §103(a) as being unpatentable over Zhu (U.S. Patent No. 6,468,345), Fondriest (U.S. Patent No. 4,174,974), Fuchigami (Japanese Pub. No. JP 0483744, or Novak (Canadian Patent No. CA2,324,486) alone or in view of Rae (U.S. Patent No. 5,447,197).

Applicants have amended claim 38 as follows:

(1) CaO content in the female body was amended to 20%-55%, CaO in the male body was amended to 0%-40%. $SiO_2$ content in the female body was amended to 50%-70%. These amendments clarify that the sialite binary wet cement of the present invention comprises less CaO and more $SiO_2$, which is supported by tables 2 and 3 in paragraphs [0102] and [0103] of the description.

(2) The male body of claim 38 was narrowed to a "wet form".

(3) The wording "proportion of the two components of the wet cement is that the female body ranges from 20% by weight to 99% by weight, and the male body ranges from 1% by weight to 80% by weight" was deleted from claim 38, in light of the 5th paragraph of the claim.

(4) Claims 56 and 59 were incorporated into claim 38 in order to define more clearly the wet states of the female body and male body, which achieves better technical results.

(5) Claims 45-46 and 49-51 were incorporated into claim 38 in order to define more clearly the materials of the female body.

(6) Claim 53 was incorporated into claim 38 in order to define more clearly the materials of the male body.

The sialite binary wet cement of the present invention is aluminosilicate-based cement designed by using earth-rock formation simulation theory, and it has more $SiO_2$ content and

less CaO content then conventional cement. Conventional wet cements are calcium-rich cements having high CaO content. Therefore, the sialite binary wet cement of the present invention has more $SiO_2$ content and less CaO content than that of the conventional cements.

The sialite binary wet cement of the present invention comprises two parts, namely female body and male body, each of the female body and the male body has a wet form obtained by a wet-milling process. As mentioned in paragraph [0106] of the description, a wet-milling process is quite flexible. For example, the starting materials can first be wet-crushed and wet-milled respectively, then mixed and homogenized according to a desired proportioning ratio, or alternatively the starting materials can first be formulated respectively according to grindability, then wet-crushed and wet-milled and, finally mixed and homogenized to obtain slurry and paste which do not need further dry treatment. Furthermore, as mentioned in Example 1 and Example 2, wet-milling efficiency is 150% or more of dry-milling efficiency, and the finesses obtained by the wet-milling is much higher than the finesses obtained by the dry-milling. In addition, the wet-milling process can economize on energy, produces less pollution, less dust, and less noise.

Each of the female body and the male body is in a wet form and is storable for a long term. In contrast, the conventional cements will set once it contacts water, therefore it cannot be stored for a long term.

Any one of the female body and the male body alone cannot form cement, but by simply mixing both the female body and the male body, the sialite binary wet cement will be formed.

As described in paragraphs [0086] – [0088] of the present application, the female body and the male body can be divided into two types: (1) the female body has reaction activity itself, and the chemical reaction can spontaneously conduct under a certain condition to form cementitious substance; and function of the male body is to supply the reaction condition, and to excite reaction activity of the female body and make the reaction activity exert adequately and result in good strength; (2) the female body has a certain reaction activity itself, and can react with the male body under a certain condition to form concreting substance. The function of the male body is not only to supply the necessary reacting substance with the female body, but also to supply the reacting condition to make the effect of the female body exerted

adequately and to result in good strength.

Therefore, in the present invention, function of the male body is to create environmental conditions for causing the female body to take hydration and hardening reaction and at the same time become a part of the hydration and hardening products. That is to say, in the present invention, the purpose of "adding calcium" is to create environmental conditions for causing the aluminosilicate-based matters to take chemical reactions, and not form the materials comprised of tricalcium silicate and dicalcium silicate as the conventional cement clinkers do. As a result, in the present invention, calcium will be added in a relatively small amount.

With regard to the cited reference US 6,468,345B1 (designated hereafter as D1 ), as shown in claims 1, 19, 20, 21 and Example 1, D1 discloses a process for simultaneously producing steam power and fast-burnt cement clinkers in a single coal powder-burning boiler system comprising blending raw coal with AMC to form an admixture, said AMC comprising a calcium-rich substance in the form of CaO; grinding the homogeneously mixed coal mixture into a powder having a fineness of 4,900 opening/$cm^2$ with a sieve residue of less than 30%, injecting the powder thus obtained into a furnace chamber and produce a reaction between the AMC and coal ash produced by the combustion to form fast-burnt cement clinkers, wherein the amount of AMC blended with the raw coal provides a fast-burnt cement clinker having a Ca content expressed at CaO % by weight in the range from 30-65% based on the total weight of the fast-burnt cement clinker. Then, a fast-burnt cement is prepared by grinding cementitious active substances consisting of the fast-burnt cement clinker together with a conventional cement auxiliary substance.

D1 fails to disclose and teach two-part wet cement, to say nothing of the two-part wet cement of the present invention which includes the separately packed female body and male body each of which is in a wet form, is storable for a long term, and has mutual complementary composition for each other, such that if the female body changes its composition, the male body can change its own composition accordingly. The wet cement can be formed by simply mixing the female body and male body.

D1 also fails to give any teaching for adjusting $SiO_2$ content, to say nothing of achieving a wet cement having less CaO and more $SiO_2$ contents than that of the conventional cement clinkers. By contrast, as shown in Comparative Example 1 and 2 as well as test example No. 11 and 12 of Table 5 and 6 in D1, when limestone is used instead of the AMC, the obtained cement clinker has less CaO and more $SiO_2$ content, but has poor performance and has not much use value. In this regard, it is believed that D1 teaches away from cement that uses less CaO and more $SiO_2$ while achieving better cement performances.

The main raw materials for cement clinker of D1 is the coal powder ash obtained by adding AMC into fuel coal, but the main raw materials of the female body of the present invention have much more kinds of wet materials as listed in claim 38.

Furthermore, in D1, AMC has to be included in the main raw materials, but in the present invention, lime or the like can be included in the female body and/or male body (see paragraph [0172] and Examples).

In D1, dry form and dry milling processes are used, but in the present invention, both of the female body and the male body have wet forms obtained by a wet-milling process and thus achieve the aforementioned better results.

With regard to the cited reference US 5,447,197 (designated hereafter as D5 ), as recited in claim 1, D5 discloses a method of cementing within a subterranean formation for an oil or gas well, the method comprises the steps of: formulating a storable, hydraulically-active, cementitious slurry by mixing together a hydraulically-active cementitious material, a set retarder, a suspending agent and water; and activating the storable slurry by mixing together an activator and the storable slurry.

Column 3, lines 50-65 and Table 1 of D5. The Portland cement is a main component for the hydraulically-active cementitious material. Therefore, the hydraulically-active cementitious slurry must not be storable for a long term.

D5 fails to give any teaching for adjusting $SiO_2$ content, to say nothing of achieving a wet cement having less CaO and more $SiO_2$ contents than that of the conventional cement clinkers.

D5 also fails to disclose and teach two-part wet cement, to say nothing of the two-part wet cement of the present invention comprising the separately packed female body and male body each of which is in a wet form, is storable for a long term, and has mutual complementary composition for each other, such that if the female body changes its composition, the male body can change its own composition accordingly. Main components of the female body are slag, coal ash or the like. The wet cement can be formed by simply mixing the female body and the male body.

Therefore, for a person skilled in the art, it is not obvious to achieve the amended claim 38 of the present invention even in light of the combination of D1 and D5.

With regard to the cited reference US 4,174,974 (designated hereafter as D2), JP04083744 (designated hereafter as D3) and CA2324486 (designated hereafter as D4), D2 discloses a manufacturing process for converting coal ash slag into powder-form cement clinkers, wherein the mineral containing lime with slag is in the ratio of 1 part slag to 1.2 to 4 parts of said mineral containing lime. D3 discloses a one-package powder clinker. D4 discloses a hydraulic binder comprised of a special blast furnace slag.

D2, D3 and D4 fail to give any teach for adjusting $SiO_2$ content, to say nothing of achieving a wet cement having less CaO and more $SiO_2$ contents than that of the conventional cement clinkers. D2, D3, and D4, also fail to disclose and teach two-part wet cement, to say nothing of the two-part wet cement of the present invention comprising the separately packed female body and male body each of which is in a wet form, is storable for a long term, and has mutual complementary composition for each other, such that if the female body changes its composition, the male body can change its own composition accordingly. The wet cement can be formed by simply mixing the female body and the male body.

Therefore, for a person skilled in the art, it is not obvious to achieve the amended claim 38 of the present invention even in light of the combination of D1, D2, D3, D4 and/or D5.

Regarding the 35 U.S.C. §112, second paragraph rejection, the terms "strong alkali" and/or "strong alkali salt" have been deleted from claims 53-54.

## CONCLUSION

In light of the foregoing, Applicants respectfully submit that claims 38, 39, 41, 43, 44, 47, 48, 52, 54, 57, and 60-68 are allowable.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

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